UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

SRF-5J

January 22, 2001

Mr. Mark E. Buck, P.E.
88th Regional Support Command
Environmental/Real Estate Division Chief
506 Roeder Circle
Ft. Snelling, Minnesota 55111-4009

Subject: ***Response to Comments on the Draft Final Quality Assurance Project Plan Fort Dearborn U.S. Army Reserve Center, Chicago, Illinois***

Dear Mr. Buck:

The United States Environmental Protection Agency (USEPA) has reviewed the Draft Final Quality Assurance Project Plan (QAPP) dated October 2001, and the U.S. Army Corps of Engineers (USACE) responses, dated October 15, 2001 to U.S. EPA comments dated August 7, 2001. Based upon our review, U.S. EPA has the following responses and additional comments.

GENERAL COMMENTS:

A. **USEPA Response to USACE Draft QAPP Response:** Comment partially addressed: The original comment states that project QA/QC requirements, limits, and other specifications should be included in the body of the Ferguson Harbour Incorporated (FHI) QAPP. The FHI Project QAPP is to be a "stand-alone" document, and it will be confusing at best if two separate QAPP are to be used for the same project. This situation will only be compounded if any addendums are ever made to the FHI Project QAPP, with it's own associated references/appendices. US-EPA requests that all project specific criteria be included in the body of the Project QAPP itself, and that project SOPS be included as an appendix. Please also see Response to Comments for Comment #21 below. **USACE Response:** Tables 9-2 through 9-9 provide project QA/QC requirements, limits, and other specifications. The text has been revised accordingly to provide references to the tables. To provide for clarity, and avoid confusion, the laboratory QAPP has been removed from the document and all project QA/QC requirements are provided in Section 9.0 of the FHI Project QAPP. **USEPA Response : Concur with response.**

B. **USEPA Response to USACE Draft QAPP Response:** Tables 8-1 through 8-6 contain QC criteria that do not match what is expressed in other areas of the QAPP. There are numerous references to items with caveats such as "only applies to results >MRL" (see Table 8-1 MSD Acceptance Criteria). MRLs have not been defined in the FHI Project QAPP, nor accepted for this project by US-EPA. Another caveat: "Recoveries vary per analyte-widest range shown"(see Table 8-1 LCS, MS. Surrogates; Acceptance Criteria). There is mention (in several parts of the Tables) of a caveat "Sporadic Marginal Failure", but no definition of what it means, or when it might be triggered. These types of caveats and expansions/extensions to QC criteria (and others) appear throughout Tables 8-1 thru 8-6. Furthermore, since there are new and/or additional QC criteria listed, they no longer mesh with the National Functional Guidelines, and there is no substantial expression of data qualification/flagging criteria in these tables accompanying these changes. The entire structure and linking of the QC limits, acceptance criteria and subsequent data qualification/flagging protocols need to be clear and consistent. Comment not addressed. **USACE Response:** Tables 9-2 through 9-9 have been added and express project QC acceptance criteria. MRLs/MDLs have been defined in Tables 3-1 through 3-5. Compound specific recovery limits have been provided for all analytes in Tables 9-8 through 9-9. The text has been revised accordingly to provide reference to the tables. QC limits, acceptance criteria, and data qualification/flagging protocols as provided in Section 9.0 are consistent with the NFG. **USEPA Response: Understood. Please see Additional Comments Section below for related comments on added/modified tables.**

DRAFT/DRAFT FINAL PROJECT QAPP COMMENTS AND RESPONSES:

Comments #1 through #6 already addressed.

7. **Section 4.0 Sampling Procedures, p.20 USEPA Response to USACE Draft QAPP Response:** US-EPA has only agreed to a 48hr. un-preserved max. hold time. Change pages received the week of July 16 stated "an IEPA modified 5035" will be utilized. Further, faxed documentation received earlier (dated 05/23/01) briefly describes "FFU Procedure #2 and ADM Procedure #14". These do not appear to be anything like 5035, as 5035 is based upon a hermetically sealed sampling container to prevent VOC losses from handling both in the field, as well as in the lab. Further change pages received as of 07/27/01 now state that 5035 will be used, with a brief explanation of the procedures. Please provide clarification as to which specific VOC soil sampling procedure is to be utilized. **USACE Response:** Encore samplers with a 48hr. hold time will be utilized, consistent with IEPA Administrative Procedures 2 and 14. The text has been changed where appropriate for consistency and clarity. **USEPA Response: Concur.**

Comment #8 already addressed.

9. **Section 9.2 Data Review, p. 39-41 USEPA Response to USACE Draft QAPP Response:** Comment Partially Addressed. It has not yet been established how data will be qualified in the instances where the N.F.G. is silent, or where N.F.G. qualification requirements and QC parameters may be different for SW-846 methods vs. CLP protocols. Also there are new Tables 8-1 through 8-6 (Section 8.3.2 of the FHI Project QAPP) that appear to be based upon the USACE Louisville Chemical Guidance Plan Tables, but this text has been struck out. Please elaborate. **USACE Response:** Tables 9-2 through 9-9 provide the qualification criteria for this project. NFG acceptance criteria will be used during data validation to determine the validity

and credibility of the project specific data. SW-846 acceptance criteria as provided in Tables 8-1 through 8-6 will be used to determine an acceptable analytical run or as necessary in conjunction with the NFG for data validation. The text has been revised accordingly to provide references to the tables. **USEPA Response: Understood.**

Comment #10 already addressed.

11. **Section 9.2 Data Review, p. 39-41. USEPA Response to USACE Draft QAPP Response:** Comment partially addressed. Even in the most rudimentary data reviews, at least summary tables or laboratory printouts of initial and continuing calibration data are examined to ensure that the instruments were calibrated properly in a timely manner. Although LCS, MSD, and surrogate recoveries are valuable QC tools, they do not provide very useful information to determine if instrument calibrations were done properly, done in a timely manner, and if any deviations and consequent corrective actions were noted. **USACE Response:** It has been agreed by all parties that full data validation will be conducted at the 10% level. Section 9.2 has been revised for clarity and accuracy. **USEPA Response: Comment partially addressed. See Additional Comments Section below.**

Comment #12 already addressed.

13. **Section 9.2 Data Review, p. 39-41 USEPA Response to USACE Draft QAPP Response:** US-EPA wishes to be informed when a specific validation firm is selected, and be provided with their name, address, phone and contact information (name of validator, if known). **USACE Response:** The validation firm will be Leo A. Knupple and Associates, Inc., 7770 Cooper Road, Montgomery, Ohio, 45242, tel. 513-793-4222. **USEPA Response: Concur. Please incorporate this information into the FHI Project QAPP.**

APPENDIX A: ARDL QUALITY ASSURANCE PROGRAM PLAN COMMENTS:

14. **ARDL Quality Assurance Program Plan. USEPA Response to USACE Draft QAPP Response:** See US-EPA Response for General Comment A and Comment #21. **USACE Response:** To provide for clarity and avoid confusion, the laboratory QAPP has been removed from the document and all project QA/QC requirements are provided in Section 9.0 of the FHI Project QAPP. **USEPA Response: Concur.**

15. **ARDL Quality Assurance Program Plan, Section 6.2.6 Manual Integration, p.36 USEPA Response to USACE Draft QAPP Response:** Comment not addressed. See attached US-EPA Region V Policy on Manual Integration for further clarification of what is required. **USACE Response:** In lieu of an ARDL SOP, manual integration will be conducted in accordance with USEPA Region V policy. Language has been provided in Section 6.0 to present the manual integration expectations for this project. **USEPA Response: Concur with inclusion of manual integration guidance in Section 6.0. Please see October 2001 FHI QAPP Additional Comments Section following.**

Comment #16 already addressed.

17. **Appendix B Forms** **USEPA Response to USACE Draft QAPP Response:** This question originated as there were two different C.O.C. forms in Appendix B with different indications of how this data would be recorded; the ARDL blank C.O.C. form, and an example C.O.C. form from the Army Corps of Engineers. The USACE response to comment states that no preservation information is to be included on the C.O.C. form, when both the ARDL blank C.O.C (Appendix B-1) and the USACE C.O.C. exemplar (Appendix B-2) clearly showed these preservation/temp./Ph. data are to be recorded on the C.O.C. forms. **USACE Response:** The ADRL C.O.C. will be used for this project and preservation information will be recorded on the form including when samples are placed on ice. Temperature and Ph data are not required to be collected in the field; therefore, this information will not be recorded on the field C.O.C. To avoid any further confusion, the laboratory QAPP has been removed from the document and the C.O.C. to be used for this project is provided in the Field Sampling Plan. **USEPA Response: Concur. C.O.C. provided in Field Sampling Plan., and field data to be recorded.**

18. **Appendix D GC/MS Requirements** **US-EPA Response to USACE Draft QAPP Response:** Comment not addressed. The ARDL QAPP is not the Project QAPP, which is to be the document which takes precedence. In the Project QAPP, there is not even a reference to this Appendix of the ARDL QAPP, and yet the procedures in this Appendix of the ARDL QAPP is "routinely used". To reiterate, if there are specific procedures to be utilized, that are to be included in the body and text of the project specific QAPP. **USACE Response:** Acceptance criteria will be as specified in the NFG and SW-846 requirements for the required analysis (ie. VOCs, SVOCs, PNAs, PCBs, glycols, metals and mercury). To provide for clarity and avoid confusion, the laboratory QAPP has been removed from the document and all project QA/QC requirements are provided in Section 9.0 of the FHI Project QAPP. **USEPA Response: Understood; data validation criteria provided in Section 9.0**

19. **Appendix E GC Requirements** **USACE Response and US-EPA Response: See Comment #18.**

20. **Appendix F Inorganic Analysis Requirements** **USACE Response and US-EPA Response: See Responses to Comment #18.**

21. **Appendix H Preventive Maintenance Schedules** **US-EPA Response to USACE Draft QAPP Response:** Comment not addressed. To aid clarity, the original US-EPA comment was referring to Section 11 of the FHI Project QAPP, and there is no reference in the FHI Project QAPP (Section 11, Preventive Maintenance) of this Appendix H Preventive Maintenance Schedule (contained in the ARDL QAPP). It appears that USACE believed we were referring to the ARDL QAPP, not the FHI Project QAPP. **USACE Response:** To avoid any further confusion, the laboratory QAPP has been removed from the FHI Project QAPP. **USEPA Response: Concur.**

APPENDIX B: SOP COMMENTS

Comments #22 and #23 already addressed.

24. **SOP VOC - 8260B Analysis, Section 7.3.3/7.3.3.1 Soils/Subsampling.** **US-EPA Response to USACE Draft QAPP Response:** See Response to Comment #7. **USACE Response:** To provide for clarity and avoid confusion, the laboratory QAPP has been removed from the FHI

Project QAPP including laboratory SOPs. Method 8260B will be used for VOC analysis in accordance with the FHI Project QAPP. Method 5035 Modified will be used for VOC sample collection and preservation, consistent with IEPA FFU Administrative Procedures. **USEPA Response: Please be advised that laboratory SOPs are required to be included with the project QAPP. The confusion arises when two separate QAPP documents, often with conflicting QA/QC criteria, are included and referenced. Please include the ARDL Laboratory SOPs.**

Comments #25, #26, and #27 already addressed.

28. **SOP TPH Analysis. US-EPA Response to USACE Draft QAPP Response:** Comment partially addressed. Has a MDL/PQL for Glycol analysis been established by the laboratory? If so, can these values be provided? **USACE Response:** The MDL/MRL for glycol has been added to Section 3.6.2. **USEPA Response: Concur. Please include glycol values in the Target Compound List Tables Section of the document for clarity.**

29. **SOP for TCLP Analysis. US-EPA Response to USACE Draft QAPP Response:** Comment not addressed. US-EPA is aware of the purpose of performing a TCLP analysis; the original comment was raised by the US-EPA Project RPM to determine if TCLP analysis is to be done to determine suitability of waste for disposal and how the analysis would be done. If an analytical protocol is listed in the QAPP and will be utilized in the project, the SOP should be provided. **USACE Response:** For reference purposes, the SOP for Method 1311 (TCLP Extraction) has been submitted separately to USEPA and IEPA . **USEPA Response: Concur. SOP provided.**

30. **Table 3-1 8260B VOC TCL List Revisions. US-EPA Response to USACE Draft QAPP Response:** There were extensive changes to this table without the utilization of redline/strikeout. Why are there now only approximately 33 analytes listed in the Draft Final FHI QAPP Table 3-1, when the same 8260 VOC table in the draft QAPP listed approximately 64 analytes? It appears that the ARDL QAPP Appendix D.2 VOC TAL - Contract Required Quant. Limits were substituted. This list is also considerably truncated from the analytes listed for the ARDL 8260 SOP. Why? **USACE Response:** The VOC analyte specifications in the FHI Project QAPP are the analytes to be tested for. The analytes contained in the ARDL SOP 8260B were a generic list containing all analytes that may potentially be analyzed. The CLP TCL will be analyzed for VOCs using Method 8260B. Table 3-1 has been revised accordingly. **USEPA Response: Comment not addressed. US-EPA wishes clarification as to why the list of analytes has been reduced to this level. US-EPA did not specify, nor request that the SW-846 8260B list be replaced with the much truncated CLP listing. Please utilize the 8260B listing of compounds.**

31. **Table 3-2 8270C SVOC MDL/PQL Revisions. US-EPA Response to USACE Draft QAPP Response:** There were changes to the MDL/PQL values this table without the utilization of redline/strikeout. 8 compounds had their low soil Quant. Limits raised to 830 ug/Kg. Please elaborate. **USACE Response:** The low soil quantitation limits were revised according to the reporting limits provided by the laboratory. The CLP TCL will be analyzed for SVOCs using Method 8270C. **USEPA Response: US-EPA wishes clarification as to why the list of analytes has been changed. US-EPA did not specify, nor request that the SW-846 8270C list be replaced with the CLP listing. Please utilize the 8270C listing of compounds.**

ADDITIONAL COMMENTS SECTION: COMMENTS ADDRESSING CHANGES INCORPORATED INTO OCTOBER 2001 DRAFT FINAL FHI QAPP.

GENERAL COMMENT: It is recommended that a column be added to the Target Analyte Tables (Tables 3-1 through 3-5) listing the Region IX PRGs (for soil) next to each analyte. It will be of assistance to any present or future document user to have the PRGs in these tables, readily available to show that the project DQOs can be achieved by the recommended analytical methods.

COMMENTS : OCTOBER 2001 DRAFT FINAL QAPP.

1. **Section 4.0 Sampling Procedures, p.22 USEPA Comment:** It is recommended that the text in the first paragraph be modified to state precisely which FSP is being referenced, by version number, date, etc. This is so that in the future, should there be modifications to the FSP, there will be no misunderstanding as to which version is being referenced.

2. **Section 6.2.5 Manual Integrations, p.34-36. USEPA Comment:** This guidance is incorporated only in the GC Methods Section, not GC/MS. It should be applicable to both method types, and it would be preferable to modify the text to reflect which methodologies this guidance will apply to for clarity.

3. **Section 6.2.5 Manual Integrations, p.35. USEPA Comment:** Text states that "if required by the customer, a third party data validation performed by others of the sample results obtained by manual integration is completed". US-EPA wishes to re-state that a third party data validation is required for all manually-integrated sample results. It is also unclear in Section 6.2.5 as to what ARDL's policy is on the use of manual integration for initial/continuing calibration or the generation of other critical QC data, and what is not acceptable in these circumstances. Please refer to already provided US-EPA Region V Policy on Manual Integration.

4. **Table 8-1 (8260B) MS/Acceptance Criteria. USEPA Comment:** There is a caveat that states "Only if [spike] >1/4 [sample]." What does this mean? Concentrations?

5. **Table 8-1 (8260B) Surrogate/Corrective Action. USEPA Comment:** Text only states "Rerun sample". What if the recovery is <10%? When do you re-extract/rerun?

6. **Table 8-1 (8260B) MS/MSD/Surrogate Lab Flagging Criteria. USEPA Comment:** There is text that states "sample data IAW with lab protocol". Does IAW mean "in accordance with"?

7. **Table 8-2 (8270C) Initial Calibration/Frequency. USEPA Comment:** Frequency is stated "as required", and is non-specific. A much better definition was provided in Method 8260B for Frequency, (ie. "prior to analysis and when continuing calibration fails criteria").

8. **Table 8-2 (8270C) Initial Calibration Verification/Corrective Action. USEPA Comment:** Corrective Action is stated "Correct problem and repeat", and is non-specific. A much better definition was provided in Method 8260B for Corrective Action, (ie. "Correct problem and repeat (rerun). If still out of control, recalibrate instrument").

9. **Table 8-2 (8270C) MS/Acceptance Criteria. USEPA Comment:** Please see Comment #4 on spike/sample definitions.

10. **Table 8-2 (8270C) Surrogate/Corrective Action. USEPA Comment:** Text is somewhat unclear, as it states "rerun samples and/or extract when two surrogates are out or <10%." Please specify as to what "out" is; how far out of spec. for surrogates to trigger a rerun or extraction. If a surrogate is <10% recovery, is the sample re-extracted?

11. **Table 8-2A (8270C - SIM) Flagging Criteria. USEPA Comment:** This table is vague and limited in detail. Is it laboratory flagging criteria? If so, the flagging criteria definitions are vague and even contradictory. For Initial Calibration, it states "R" flag if the calibration fails, or if <.995 then J/UJ/R, then "No flagging". For CCV, it gives vague references to "marginally out", or "marginally less". For Target Analyte Confirmation, it states "No flags". What purpose does this table serve? There needs to be a complete MQO table established for Method 8270C-SIM, as this method is being utilized in place of SW-846 8310 for PNAs, and the QA/QC requirements must be clear. Also, a separate 8270C-SIM Summary of Data Validation Qualifiers Table needs to be established in Section 9.0 (Data Validation Tables).

12. **Table 8-3 (8082) PCBs/ MB Acceptance Criteria. USEPA Comment:** Text states that "up to 5% may exceed". Exceed by how much? What is deemed acceptable?

13. **Table 8-3 (8082) PCBs/MS Acceptance Criteria. USEPA Comment:** Please see Comment #4 on spike/sample definitions.

14. **Table 8-3 (8082) PCBs/Surrogates Acceptance Criteria. USEPA Comment:** Text states to use "professional judgement regarding additional corrective action requirements". If surrogates are repeated and still fail, corrective actions must be defined as to when they will be triggered, and what will be done.

15. **Table 8-3 (8082) PCBs/Target Analyte Confirmation. USEPA Comment:** Text in this subsection merely says "whenever a positive is detected in one column" and "N/A". This is not sufficient. An RPD cannot be determined w/o two column comparisons.. Also, what is the consequences if the RPD is >40%? When is data deemed to be unacceptable?

16. **Table 8-4 (8015B) Glycol/MB Acceptance Criteria. USEPA Comment:** Text states that "up to 5% may exceed". 5% of what, as this test is only for Ethylene Glycol? Exceed by how much?

17. **Table 8-4 (8015B) Glycol/MS Acceptance Criteria. USEPA Comment:** Please see Comment #4 on spike/sample definitions.

18. **Table 8-4 (8015B) Glycol/Target Analyte Confirmation/Acceptance Criteria. USEPA Comment:** Text in this subsection says "Confirm by fortification". Please add or reference some specifics to this Acceptance Criteria, as to what is acceptable performance, and what corrective action will be done if this test fails criteria.

19. **Table 8-5 (6010-ICP) Initial Calibration/Acceptance Criteria. USEPA Comment:** Text states "N/A". There is no acceptance criteria for initial calibration? Corrective actions then state "correct problem and repeat"? Please elaborate.

20. **Table 8-5 (6010-ICP) Initial Calibration Blank/Acceptance Criteria. USEPA Comment:** Text states "up to 5% may exceed". Exceed how much?

21. **Table 8-5 (6010-ICP) Method Blank/Acceptance Criteria. USEPA Comment:** Text states "analytes <MRL or <5% of least concentrated associated sample". Later data validation tables (Section 9.0, Table 9-6) don't mention this caveat for ICP Method Blanks. Please explain.

22. **Table 8-6 (7470-Hg) Initial Calibration Blank - Method Blank/Acceptance Criteria. USEPA Comment:** For ICB, text states "up to 5% may exceed; this analysis is only for one analyte, Mercury. For MB, Please see previous Comment #21 on Method Blank (compared to Section 9.0, Table 9-7).

23. **Section 9.2 Data Review, p.58. USEPA Comment:** There is still some differences in this version of the document that need attention. The laboratory should do it's normal internal QC and completeness checks on 100% of the data, and should submit the entire data packages, including raw data, to the main/prime contractor. Harza, being the main contractor, needs to do a 100% data review (not full data validation). A 100% data review is more than just a "completeness check", but examines all the laboratory deliverables, compares the data received with QC criteria for all the Quality Control Elements (including calibration), Acceptance Criteria, Corrective Action Reports, etc. This ensures that QC criteria, data quality, and project DQOs are met. It is vital that Harza do this for 100% of the data. If there is any problems with the data, it is much more cost effective to find, and to rectify the problems as soon as possible to avoid having to reject large amounts of data later and have to resolve data gaps by re-mobilization and re-sampling efforts.

    Please note that the data review/verification process does not necessarily entail the recalculation and reconstruction (from laboratory raw data) of sample and QC results; that is done in a full data validation. This reconstruction of the data is the 10% full data validation, in which data is selected from all methods, and all matrices so to be as representative as possible. If a systemic/method/matrix problem(s) is found to exist, then the 10% validation should be increased as described in Section 9.2, up to 100% of the affected method/matrix data if necessary. The full data validation is normally done by an independent, third party. Harza may certainly also do a 10% full data validation internally as well if so desired. The independent, third-party, full data validation gives an independent opinion on overall data quality, and can be used as a powerful tool to provide an unbiased defense of project data quality, and subsequently, the decisions based upon that data.

24. **Table 9-2 (VOC) Summary of Data Validation Quality Objectives/Initial and Continuing Calibration, Criteria and Qualifiers. USEPA Comment:** For both initial and continuing calibration, the minimum RF value is ≥.05, and only if there are "gross exceedences" are non-detects flagged "R", rejected. The quality measurement does not agree with the acceptance criteria set in Method Quality Objective Table 8-1 for VOCs. Some compounds will pass QC criteria in one table, and fail in another. Also, what is deemed a "gross exceedence?". What value will set the limits of acceptability?

25. **Table 9-2 (VOC) Summary of Data Validation Quality Objectives/Method Blank, Flagging Criteria. USEPA Comment:** Text states to qualify samples (<5x of blank concentration, and <10x for "common". Please specify the list of common compounds that this will apply to for this project. Also, the normal flagging for positive hits to qualify for method blank is "U", not UJ.

26. **Table 9-2 (VOC) Summary of Data Validation Quality Objectives/System Monitoring Compounds, Flagging Criteria. USEPA Comment:** There is text in several rows that state "RECs >UL", etc. Does RECs stand for recoveries? Also, the flagging requirements state that if REC is <10%, flagging is J/R, detects/non-detects. Is there any LL (other than 0), where recovery is so poor that the data should be flagged R/R detects/non-detects?

27. **Table 9-2 (VOC) Summary of Data Validation Quality Objectives/Internal Standards, Flagging Criteria. USEPA Comment:** There is an entry that states "Area <<-50%". What does the "<<" stand for? What values?

28. **Table 9-3 (SVOC) Summary of Data Validation Quality Objectives/Initial and Continuing Calibration, Criteria and Qualifiers. USEPA Comment:** For both initial and continuing calibration, the minimum RF value is ≥.05, and only if there are "gross exceedences" are non-detects flagged "R", rejected. The quality measurement is different from acceptance criteria set in Method Quality Objective Table 8-2 for SVOCs. Which takes precedence? Also, what is deemed a "gross exceedence?". What value will set the limits of acceptability?

29. **Table 9-3 (SVOC) Summary of Data Validation Quality Objectives/Method Blank, Flagging Criteria. USEPA Comment:** Text states to qualify samples (<5x of blank concentration, and <10x for "common". Please specify the list of common compounds that this will apply to for this project. Also, the normal flagging for positive hits to qualify for method blank is "U", not UJ.

30. **Table 9-3 (SVOC) Summary of Data Validation Quality Objectives/Surrogate Spikes, Flagging Criteria. USEPA Comment:** The flagging requirements state that if REC is <10%, flagging is J/R, detects/non-detects. Is there any LL (other than 0), where recovery is so poor that the data should be flagged R/R detects/non-detects?

31. **Table 9-3 (SVOC) Summary of Data Validation Quality Objectives/Internal Standards, Flagging Criteria. USEPA Comment:** There is an entry that states "Area <<-50%". What does the "<<" stand for? What values?

32. **Table 9-4 (PCBs) Summary of Data Validation Quality Objectives/Initial Calibration, Criteria and Flagging Qualifiers. USEPA Comment:** For initial calibration, Data Review and Flagging Criteria states "Qualify sample results not withing criteria" as J/UJ. How far can initial calibration be out of spec before either the instrument is recalibrated and/or data is questionable to point that it must be flagged "R", rejected?

33. **Table 9-4 (PCBs) Summary of Data Validation Quality Objectives/Calibration Verification, Criteria and Flagging Qualifiers. USEPA Comment:** For calibration verification, Data Review and Flagging Criteria does not appear correct. Acceptance Criteria states that a %D should be ≤15%, or mean D ≤15%, yet the Data Review/Flagging Criteria state REC >130%, and "marginally out use professional judgement", and REC>70%. Please explain.

34. **Table 9-4 (PCBs) Summary of Data Validation Quality Objectives/Method Blank, Flagging Criteria. USEPA Comment:** Please note the normal flagging for positive hits to qualify for method blank is "U", not UJ.

35. **Table 9-4 (PCBs) Summary of Data Validation Quality Objectives/Surrogate Spikes, Flagging Qualifiers. USEPA Comment:** The flagging requirements state that if REC is <10%, flagging is J/R, detects/non-detects. Is there any LL (other than 0), where recovery is so poor that the data should be flagged R/R detects/non-detects?

36. **Table 9-4 (PCBs) Summary of Data Validation Quality Objectives/Target Analysis Confirmation. USEPA Comment:** Text in this subsection merely says "whenever a positive is detected in one column" and "results exceeding". This is not sufficient. An RPD cannot be determined w/o two column comparisons.. Also, what is the consequences if the RPD is >40%? When is data deemed unacceptable?

37. **Table 9-5 (Glycol) Summary of Data Validation Quality Objectives/Initial Calibration and ICV, Criteria and Flagging Qualifiers. USEPA Comment:** For initial calibration and ICV, Data Review and Flagging Criteria states "Qualify sample results not withing criteria" as J/UJ. How far can initial calibration/ICV be out of spec before either the instrument is recalibrated and/or data is questionable to point that it must be rejected?

38. **Table 9-5 (Glycol) Summary of Data Validation Quality Objectives/CCV, Criteria and Flagging Qualifiers. USEPA Comment:** For CCV, Data Review and Flagging Criteria does not appear correct. Acceptance Criteria states that a %D should be ≤15%, or mean D ≤15%, yet the Data Review/flagging criteria state REC >130%, and "marginally out use professional judgement", and REC>70%. Please explain.

39. **Table 9-5 (Glycol) Summary of Data Validation Quality Objectives/MB, Acceptance Criteria. USEPA Comment:** Text states that "up to 5% may exceed". 5% of what, as this test is only for Ethylene Glycol? Exceed by how much?

40. **Table 9-5 (Glycol) Summary of Data Validation Quality Objectives/Target Analysis Confirmation. USEPA Comment:** Text in this subsection merely says "whenever a positive is detected in one column" and "results exceeding". This is not sufficient. An RPD cannot be determined w/o two column comparisons.. Also, what is the consequences if the RPD is >40%? When is data deemed unacceptable?

41. **Table 9-6 (ICP Metals) Summary of Data Validation Quality Objectives/ ICV/CCV, Flagging Criteria. USEPA Comment:** The ranges listed here are wider than what is allowable in previous Table 8-5 (Acceptance Criteria 90-110). It would be understandable for max range limits to be, for example, 85-115. But 75-125 is quite wide, and is the range normally seen for Matrix Spike. Please elaborate.

42. **Table 9-6 (ICP Metals) Summary of Data Validation Quality Objectives/ ICB/CCB/MB, Flagging Criteria. USEPA Comment:** Please note the normal flagging for positive hits to qualify for blank contamination is "U", not UJ.

43. **Table 9-6 (ICP Metals) Summary of Data Validation Quality Objectives/ LCS (soil), Flagging Criteria. USEPA Comment:** The range listed here for soil is REC <50%, flagging J/UJ. Is there any recovery level less than 50% for soil that would be considered unacceptable, such that data would be qualified R?

44. **Table 9-6 (ICP Metals) Summary of Data Validation Quality Objectives/ Matrix Spike, Flagging Criteria. USEPA Comment:** In the flagging criteria, for detects there is no flagging at all (not even "J") regardless of how low the recovery is. Why? A low MS recovery may effect the reliability of data for both detects and non-detects.

45. **Table 9-7 (Mercury) Summary of Data Validation Quality Objectives/ICV/CCV, Flagging Criteria. USEPA Comment:** The ranges listed here are wider than what is allowable in previous Table 8-6 for Hg (Table 8-6 ICV Acceptance Criteria 90-110, Table 8-6 CCV Acceptance Criteria 80-120). It would be understandable for max range limits to be, for example, +/-5% more than stated. But 75-125 (ICV), and 65-135 (CCV) is quite wide. Please elaborate.

46. **Table 9-7 (Mercury) Summary of Data Validation Quality Objectives/LCS, Flagging Criteria. USEPA Comment:** The range listed here for soil is REC <50%, flagging J/UJ. Is there any recovery level less than 50% for soil that would be considered unacceptable, such that data would be qualified R?

47. **Table 9-7 (Mercury) Summary of Data Validation Quality Objectives/ Matrix Spike, Flagging Criteria. USEPA Comment:** In the flagging criteria, for detects there is no flagging at all (not even "J") regardless of how low the recovery is. Why? A low MS recovery may effect the reliability of data for both detects and non-detects.

If you have any questions, please feel free to contact me at (312) 886-6151or Mr. Craig Thomas, at (312) 886-5907.

Sincerely,

Shari Kolak
Remedial Project Manager
Federal Facilities Response Section
Superfund Division

cc: Andrew Jankowski, IEPA
Carol Wilinski, City of Chicago
John Vranicar, Ironwood Company
Douglas Meadors, U.S. Army Corps of Engineers